Amendments to the Specification

Please replace paragraph [0003] with the following amended paragraph:

[0003] The present invention derives priority from provisional patent application number 60/481,381 filed on September 15, 2003. ~~U.S. Pat. No. 6,438,189 August 2002 Vourvopoulos 376/159; U.S. Pat. No. 4,493,998 January 1985 Smith, Jr., et al. 250/251.1; U.S. Pat. No. 4,081,675 March 1978 Bartz 250/255; U.S. Pat. No. 4,286,150 August 1981 Allen 250/269.2; U.S. Pat. No. 6,386,026 May 14, 2002 Zamfes 73/152.04; U.S. Pat. No. 6,715,347 Apr. 6, 2004 Zamfes 73/152.05; U.S. Pat. No. 6,276,190 Aug. 21, 2001 Zamfes 73/19.01.~~

Please replace paragraph [0007] with the following amended paragraph:

[0007] 3. The third sensor set consists of two sensors. First is the gamma ray 15 and beta ray 16 receivers attached together on one side and the weak ~~week~~ directional beam 27 ~~26~~ of gamma rays source 17 on opposite side of the analyzer tube 11, will produce the dual signal synchronously reflecting the absorption radiation 21 and induced radiation 16 properties of media passing inside the tube.

Please replace paragraph [0008] with the following amended paragraph:

[0008] 4. The ~~forth~~ fourth sensor of the set is the Induction coil 34 ~~35~~, with directional ferrous insert 33 this way that the magnetic field 38 is passing through the material 37 in the analytical tube. Different formations will produce a different signal 36.

Please replace paragraph [0020] with the following amended paragraph:

[0020] 3. Third sensor set consists of two sensors. First is the gamma ray 15 and beta ray 16 receivers attached together on one side and the weak directional beams 27 ~~26~~ of gamma rays source 17 on opposite side of the analyzer tube 11, This set will produce the dual signal synchronously reflecting the absorption radiation 21 and induced radiation 16 properties of media passing inside the tube.

Please replace paragraph [0021] with the following amended paragraph:

[0021] 4. ~~Forth~~ Fourth sensor of the set is the Induction coil 34 ~~35~~, with directional ferrous insert 33. This way that the magnetic field 38 is passing through the material 37 in the analytical tube. Different formations will produce a different signal 36.

Please replace paragraph [0022] with the following amended paragraph:

[0022] 5. Fifth sensor of the set consist of mass quantity 14 (Fig. 1) or Sonic source 42 on one side and the 2 receivers 43 and 44 on opposite side (Fig. 4), the signals obtained will be reflecting the ~~formations~~ formations' properties.

Please replace paragraph [0023] with the following amended paragraph:

[0023] 6. Sixth sensor set is consist of injector of dissolvent 55, which is constantly injecting small dose of dissolvent ~~in to~~ into the cuttings flow and Fluorescence brightness measurement sensor 54, which measures the amplitude and frequency of light emission produced. Preferably, the sample flows in a direction 18 or direction of movement 52, motivated by auger 22. The auger 22 may have an auger axis 53, such as metal axis 25 (Fig. 2) or a plastic axis 32 (Fig. 3). The body of analytical tube 51 may be plastic (e.g. plastic tube 41) and the auger 22 may be plastic, for example plastic auger 45. Referring to Fig. 6, the drilling cuttings may flow in a plastic tube 61 along axis 62. A source 65 gives off gamma ray beams 66 which pass through the drilling cuttings to a gamma/beta sensor 68. A lead directional restrictor 64 directs the gamma ray beams 66. Lead cover 67 and lead protection cover 63 protect nearby users from the gamma ray beams 66 and reduce the background gamma ray beams 66 to reduce background noise.

Please replace paragraph [0025] with the following amended paragraph:

[0025] 7. First Process (Natural Gamma) consists of obtaining the natural gamma radiation properties of substrata formations through measuring the drilling cuttings flow by means of gamma rays receiver 12. Shielded by lead ~~led~~ shield 19 from external radiation background the sensor is measuring the radiation of specific formation. These properties are factor of composition of the formation and this information is used for further processing.

Please replace paragraph [0026] with the following amended paragraph:

[0026] 8. Second Process (Natural Beta) consists of obtaining the natural gamma radiation properties of substrata formations through measuring the drilling cuttings flow by means of beta rays receiver 13. The shielded by lead ~~led~~ shield 19 from external radiation background the sensor is measuring the radiation of specific formation. These properties are factor of composition of the formation and this information is used for further oil and gas industry.

Please replace paragraph [0030] with the following amended paragraph:

[0030] 10. ~~Forth~~ Fourth Process (Absorption Gamma) consists in obtaining the measurement of gamma radiation emitted by the source 17 or 24 passed through the formation and received on gamma sensor 15. This measurement reflects the properties of substrata formations through measuring the drilling cuttings flow by means of Absorption of Gamma rays. The shielded by lead ~~led~~ shield 19 from external radiation background the sensor is measuring the radiation of specific formation. These properties are factor of composition of the formation and this information is used for further processing.

Please replace paragraph [0031] with the following amended paragraph:

[0031] 11. Fifth Process (Induced Gamma-Beta) consists in obtaining the measurement of gamma-beta radiation induced by the source 17 or 24 and measured by sensor 16. This measurement reflects the properties of substrata formations through measuring the drilling cuttings flow by means of induced radiation of Gamma-Beta rays. The shielded by lead ~~led~~ shield 19 from external radiation background the sensor is measuring the radiation of specific formation. The properties are the factor of composition of the formation and this information is used for further processing.